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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,775	02/22/2002	Edward Allen Rezek	56970.00002	1154
7590	03/29/2004			EXAMINER
Squire, Sanders & Dempsey L.L.P. Two Renaissance Square Suite 2700 40 North Central Avenue Phoenix, AZ 85004-4498			ROVNAK, JOHN EDMUND	
			ART UNIT	PAPER NUMBER
			3714	/
			DATE MAILED: 03/29/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

18

Office Action Summary	Application No.	Applicant(s)	
	10/080,775	REZEK, EDWARD ALLEN	
	Examiner	Art Unit	
	John E. Rovnak	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 03 March 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-21 and 23-32 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 1-7 is/are allowed.
- 6) Claim(s) 8-21 23-32 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

Response to Amendment

1. Claims 1-7 are allowed as indicated in a previous office action.
2. Claims 8-10 stand rejected under 35 USC 101 as being directed to non-statutory subject matter. The recitation of "using a third means for teaching that directs the student" includes use of a human teacher, and is therefore not directed to the technological arts.
3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 8-10 are further rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 8, "[T]he prompt" is not definite as to which preceding step it addresses. Claims 9-10 depend upon claim 8.
5. Claims 11-21 and 23-24 stand rejected under 35 USC 101 in that the recitation of "at least one teaching aid" includes a teacher or other person and is therefore not directed to the technological arts.
6. The rejection of claims 25-27 under 35 USC 101 stands.
7. In response to applicant's amendment, the recitation "using at least one teaching aid" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or

structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

8. Claims 25-27 are further rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 25, “[T]he prompt” is not definite as to which preceding step it addresses.

9. Claims 28-32 stand rejected under 35 USC 101 as set forth in the previous office action. No amendment was made to claims 28-32.

10. Claim 31 is further rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 31, “a distance learning technology” is considered vague and indefinite.

11. Regarding the requirement under 35 U.S.C. § 101 that a claimed invention be limited to the technological arts in order to be deemed statutory, the Examiner submits that the phrase “technological arts” has been created and used by the courts to offer another view of the term “useful arts.” See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of whether an invention is eligible for a patent is to determine if the invention is within the “technological arts.”

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include “laws of nature,” “natural phenomena,” and

"abstract ideas." See *Diamond v. Diehr*, 450, U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998). This addresses the second test under 35 U.S.C § 101 of whether or not an invention is eligible for a patent. The Manual of Patent Examining Procedure reiterates this point. More specifically, MPEP § 2106(II)(A) states, "The claimed invention as a whole must accomplish a practical application. That is, it must produce a 'useful, concrete and tangible result.' *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02." Furthermore, "Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under 35 U.S.C. 101." (MPEP § 2106(II)(A))

This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma*, 197 USPQ (BNA) 852 (CCPA 1978). In *Toma*, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts." The court developed a "technological arts" analysis:

The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on

Art Unit: 3714

whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. *In re Toma* at 857.

In *Toma*, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the "technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* never addressed this prong of the test. In *State Street Bank & Trust Co.*, the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result." See *State Street Bank & Trust Co.* at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §§102, 103 and 112." See *State Street Bank & Trust Co.* at 1377. Both of these analyses go towards whether the claimed invention is non-statutory because of the presence of an abstract idea.

State Street never addressed the first part of the analysis, i.e., the “technological arts” test established in *Toma* because the invention in State Street (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) **was already determined to be within the technological arts** under the *Toma* test. This dichotomy has been recently acknowledged by the Board of Patent Appeals and Interferences in affirming a §101 rejection finding the claimed invention to be non-statutory for failing the technological arts test. See *Ex parte Bowman*, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).

What is indeed important to note in the *Bowman* decision is that the Board acknowledged the dichotomy of the analysis of the claims under 35 U.S.C. § 101, thereby emphasizing the fact that not only must the claimed invention produce a “useful, concrete and tangible result,” **but that it must also be limited to the technological arts** in order to be deemed statutory under the guidelines of 35 U.S.C. § 101. The Board very explicitly set forth this point:

[1] We agree with the examiner. Appellant has carefully avoided tying the disclosed and claimed invention to any technological art or environment. As noted by the examiner, the disclosed and claimed invention is directed to nothing more than a human making mental computations and manually plotting the results on a paper chart [answer, page 5]. The Examination Guidelines for Computer-Related Inventions are not dispositive of this case because there is absolutely no indication on this record that the invention is connected to a computer in any manner.

Despite the express language of 35 U.S.C. §101, several judicially created exceptions have been excluded from subject matter covered by Section 101. These exceptions include laws of nature, natural phenomenon, and abstract ideas. See

Art Unit: 3714

Diamond v. Diehr, 450 U.S. 175, 185, 209 USPQ 1, 7(1981). We interpret the examiner's rejection as finding that the claimed invention before us is nothing more than an abstract idea because it is not tied to any technological art or environment. Appellant's argument is that the physical (even manual) creation of a chart and the plotting of a point on this chart places the invention within the technological arts.

The phrase "technological arts" has been created to offer another view of the term "useful arts." The Constitution of the United States authorizes and empowers the government to issue patents only for inventions which promote the progress [of science and] the useful arts. We find that the invention before us, as disclosed and claimed, does not promote the progress of science and the useful arts, and does not fall within the definition of technological arts. The abstract idea which forms the heart of the invention before us does not become a technological art merely by the recitation in the claim of "transforming physical media into a chart" [sic, drawing or creating a chart] and "physically plotting a point on said chart."

In summary, we find that the invention before us is nothing more than an abstract idea which is not tied to any technological art, environment, or machine, and is not a useful art as contemplated by the Constitution of the United States. The physical aspects of claim 1, which are disclosed to be nothing more than a human manually drawing a chart and plotting points on this chart, do not automatically bring the claimed invention within the technological arts. For all these reasons just discussed, we sustain the examiner's rejection of the appealed claims under 35 U.S.C. §101. See *Ex parte Bowman*, 61 USPQ2d (BNA) 1669, 1671 (BdPatApp&Int 2001)

Similarly, in the present application, claims 8-21 and 23-32 are deemed to be non-statutory because they are not limited to the technological arts; all recited steps could be performed manually by a human, thereby reinforcing the fact that Appellant's invention

fails to “[p]romote the progress of science and useful arts,” as intended by the United States Constitution under Art. I, §8, cl. 8 regarding patent protection.

In conclusion, the Examiner submits that Appellant’s claims do not meet the technological arts requirement under 35 U.S.C. § 101, as articulated in *Musgrave, Toma, and Bowman* as well as the Manual of Patent Examining Procedure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John E. Rovnak whose telephone number is (703) 308-3087. The examiner can normally be reached on Tuesday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Tom Hughes can be reached on (703) 308-1806. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John Rovnak
Primary Examiner
Art Unit 3714
